

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service
Washington, DC



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www.faa.gov/certification/aircraft

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin alerts you, owners and operators of **Brantly International, Inc., (Brantly), (Hynes) B-2, B-2A, B-2B model helicopters**, that four known incidents of tail rotor (T/R) vertical drive shaft failures have occurred, with three of the failures occurring since February 2, 2004.

Background

During an ongoing accident investigation concerning a Brantly Model B2B, we discovered that the T/R vertical drive shaft (P/N 249-10) completely sheared off at the upper bevel gear bolt hole and that the shaft had indications of fatigue cracking. The accident helicopter had a previous incident with a vertical drive shaft failure occurring eleven weeks earlier. Also, there was a more recent incident of different Model B2B vertical drive shaft failing at the same bolt hole location with indications of fatigue cracking. The other known vertical drive shaft failure at the upper bevel gear bolt hole occurred in 1973.

The Model B2B involved in the ongoing accident investigation did have a hard landing prior to the two drive shaft failures. Whether this hard landing has a connection to the shaft failure still remains to be verified. There are no known hard landings on the other two helicopters that had shafts fail. We are working with the NTSB and Brantly International, Inc to determine the cause of the fatigue cracking and the best action to correct this unsafe condition.

To prevent any further accidents, the following recommendations are provided at this time:

Recommendations

- You should remove the T/R vertical drive shaft (P/N 249-10) from the helicopter within the next ten hours time in service. Then you should disassemble the bevel gear (P/N 15-8), the flange bushing (P/N 15-6), the bolt (P/N 15-201), and the nut (P/N AN 364-1032) from the upper portion of the T/R vertical drive shaft.
- You should eddy current or fluorescent penetrant inspect the T/R vertical drive shaft for cracks at the upper bevel gear bolt hole.
- You should note the total time in service for the T/R shaft since installed new, and note the total time in service for the helicopter.

- You should replace the shaft if cracks are found or indicated.
- You should review records to determine if and at what total hours in service the helicopter may have had any hard landing.
- You should insure that all the hardware is airworthy and that the alignment of the drive shaft is correct during reinstallation.
- You should immediately report your findings to the contact person below whether you find a crack or not.
- You should repeat these recommended inspections after any hard landing. Hard landing inspections and repairs still must be done per the maintenance manual to maintain airworthiness.

For Further Information, Contact

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